

What is claimed is:

- 1 1. A surgical positioner for supporting items used in surgery, the surgical
2 positioner comprising a platform adapted to: (i) contact an individual's skin at least at
3 three points on a surface of the platform; (ii) be biased against the individual's skin
4 by at least two fasteners, each of the fasteners connected to bone of the individual
5 such that at least one of the fasteners is not parallel to at least one other of the
6 fasteners; and (iii) support at least one item by capturing at least a portion of the
7 item.
- 1 2. The surgical positioner of Claim 1, further comprising a plurality of apertures
2 defined by portions of the platform, at least one of the apertures adapted to receive
3 one of the fasteners.
- 1 3. The surgical positioner of Claim 2, wherein the platform further comprises a
2 first platform surface and a second platform surface, at least some of the plurality of
3 apertures extending from the first platform surface to the second platform surface,
4 the first platform surface defining a convex surface and the second platform surface
5 defining a concave surface.
- 1 4. The surgical positioner of Claim 3, wherein at least two of the apertures are
2 each adapted to receive one of the fasteners such that the at least two fasteners
3 received by the apertures converge towards each other.
- 1 5. The surgical positioner of Claim 4, wherein at least some of the plurality of
2 apertures defined by portions of the platform are adapted to have diameters
3 approximately equal to diameters of at least some of the fasteners.

- 1 6. The surgical positioner of Claim 4, wherein at least some of the plurality of
2 apertures defined by portions of the platform are adapted to have diameters at least
3 somewhat larger than diameters of at least some of the fasteners.
- 1 7. The surgical positioner of Claim 4, wherein the at least one item comprises at
2 least one fiducial.
- 1 8. The surgical positioner of Claim 7, wherein the at least one fiducial comprises
2 at least one modular fiducial.
- 1 9. The surgical positioner of Claim 8, wherein at least one of the plurality of
2 apertures defined by portions of the platform is adapted to receive the at least one
3 modular fiducial such that portions of the modular fiducial extend from the first
4 platform surface.
- 1 10. The surgical positioner of Claim 9, wherein at least three of the plurality of
2 apertures defined by portions of the platform are adapted to receive at least three
3 modular fiducials such that the modular fiducials can be received by at least some of
4 the apertures such that the modular fiducials form a pattern, the pattern
5 recognizable by a tracking system such that the tracking system can track the
6 position and orientation of the pattern.
- 1 11. The surgical positioner of Claim 4, wherein the at least one item comprises a
2 drill guide.
- 1 12. The surgical positioner of Claim 1, wherein the surgical positioner is mounted
2 to a table and wherein the at least one item comprises at least three modular
3 fiducials.

1 13. A method for performing a surgical procedure on an individual, the method
2 comprising:
3 (a) positioning a platform in contact with an individual's skin such that at
4 least three points of a surface of the platform contact the individual's skin;
5 (b) biasing the platform against the individual's skin using at least two
6 fasteners such that at least one of the fasteners is not parallel to at least one other
7 of the fasteners;
8 (c) using the platform to support at least one item for use in a surgical
9 procedure; and
10 (d) performing the surgical procedure.

1 14. The method of Claim 13, wherein using the platform to support at least one
2 item comprises using the platform to support at least one item for use in installing an
3 orthopedic implant in the individual and wherein performing the surgical procedure
4 comprises installing the orthopedic implant in the individual.

1 15. The method of Claim 13, wherein biasing the platform against the individual's
2 skin further comprises biasing the platform against the individual's skin such that at
3 least one fastener converges towards at least one other fastener.

1 16. The method of Claim 15, wherein biasing the platform against the individual's
2 skin further comprises attaching a retainer to a proximate portion of at least one
3 fastener.

1 17. The method of Claim 15, wherein using the platform to support at least one
2 item comprises using the platform to support at least three modular fiducials, the
3 modular fiducials supported by the platform such that the modular fiducials form a
4 pattern, the pattern recognizable by a tracking system such that the tracking system
5 can track the position and orientation of the pattern.

1 18. The method of Claim 13, further comprising connecting a second platform to
2 the platform, the second platform adapted to support a second item.

1 19. A surgical item positioner for supporting an item used in surgery, the surgical
2 item positioner comprising:

3 (a) a support platform adapted to: (i) contact an individual's skin at least at
4 three points on a surface of the platform; (ii) support at least one item; and (iii) be
5 connected to a stabilizing system; and

6 (b) the stabilizing system, the stabilizing system adapted to: (i) connect to
7 the support platform; (ii) stabilize the support platform; and (iii) be biased against the
8 individual by at least one fastener.

1 20. The surgical item positioner of Claim 19, wherein the stabilizing system
2 comprises:

3 (a) a stabilizer platform, the stabilizer platform adapted to: (i) contact an
4 individual's skin at least at three points on a surface of the stabilizer platform; (ii) be
5 biased against the individual's skin by at least two fasteners such that at least one of
6 the fasteners is not parallel to at least one other of the fasteners; and (iii) be
7 connected to the support platform by an arm; and

8 (b) the arm, the arm adapted to connect the support platform to the
9 stabilizer platform.

1 21. The surgical item positioner of Claim 20, wherein the stabilizer platform is
2 adapted to receive the at least two fasteners such that the at least two fasteners
3 converge towards each other, the at least two fasteners adapted to be secured to
4 the bony anatomy of the individual.

1 22. The surgical item positioner of Claim 21, wherein the arm comprises a flexible
2 arm.

1 23. The surgical item positioner of Claim 19, wherein portions of the support
2 platform define a portal, the portal adapted to receive the at least one item.

1 24. The surgical item positioner of Claim 23, wherein the portal is adapted to
2 interact with a bearing in a rotating fashion, the bearing adapted to interact with
3 portions of the item in a rotating and sliding fashion.

1 25. The surgical item positioner of Claim 24, wherein the bearing further
2 comprises a plurality of protrusions extending from an outer surface of the bearing,
3 at least some of the protrusions adapted to interact with a channel at least partially
4 extending around an interior circumference of the portal.

1 26. A method for establishing a reference for use as a navigational positioner in
2 surgery, the method comprising:

3 (a) positioning and securing a first modular fiducial to a structure;

4 (b) positioning and securing a second modular fiducial to the structure, the
5 second modular fiducial able to be positioned at least somewhat independently of
6 the first modular fiducial; and

7 (c) positioning and securing at least one additional modular fiducial to the
8 structure, the at least one additional modular fiducial able to be positioned at least
9 somewhat independently of the first modular fiducial and the second modular
10 fiducial, wherein the first, second and at least one additional modular fiducials are
11 positioned in one of a plurality of patterns, some of the patterns recognizable by a
12 tracking system such that the tracking system can track the position and orientation
13 of the pattern.

1 27. The method of Claim 26, wherein securing the first, second and at least one
2 additional modular fiducials comprises securing the first, second and at least one
3 additional modular fiducials to a platform and biasing the platform against an
4 individual's skin.

1 28. The method of Claim 27, wherein biasing the platform against the individual's
2 skin comprises biasing the platform against the individual's skin using at least two
3 fasteners, the platform adapted to be biased against the individual's skin by the at
4 least two fasteners such that the at least two fasteners converge towards each
5 other.

1 29. The method of Claim 28, wherein securing the first, second and at least one
2 additional modular fiducials comprises inserting ends of the modular fiducials into
3 apertures defined by portions of the platform.

1 30. The method of Claim 29, wherein securing the first, second and at least one
2 additional modular fiducials comprises inserting the modular fiducials into apertures
3 associated with identifiers.

1 31. The method of Claim 26, further comprising registering the position and
2 orientation of the pattern into the tracking system.

1 32. The method of Claim 26, wherein securing the first, second and at least one
2 additional modular fiducial comprises securing the first, second and at least one
3 additional modular fiducial to a portion of an individual's bony anatomy.

1 33. The method of Claim 32, wherein securing the first, second and at least one
2 additional modular fiducial to a portion of an individual's bony anatomy further
3 comprises using a template to determine acceptable locations for the first, second
4 and at least one additional modular fiducial.

1 34. The method of Claim 26, further comprising the tracking system providing
2 feedback if the pattern created by the first, second and at least one additional
3 modular fiducials is not recognizable by the tracking system.

- 1 35. The method of Claim 26, further comprising: using the tracking system to
- 2 position an implant relative to an individual; and installing the implant.